

IC06 Rec'd PCT/PTO 19 SEP 2005

DOCKET NO.: CELL-0290/PA513-USW01  
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Daniel Christopher Brookings, et al.

Confirmation No.: 9911

Application No.: 10/524,199

Group Art Unit: Not Yet Assigned

Filing Date: July 28, 2005

Examiner: Not Yet Assigned

For: BICYCLIC HETEROAROMATIC COMPOUNDS AS KINASE INHIBITORS

DATE OF DEPOSIT: *September 16, 2005*

I HEREBY CERTIFY THAT THIS PAPER IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS MAIL, POSTAGE PREPAID, ON THE DATE INDICATED ABOVE AND IS ADDRESSED TO THE UNITED STATES PATENT AND TRADEMARK OFFICE, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450.

*Elizabeth A. McLoud*

TYPED NAME: Elizabeth A. McLoud

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR § 1.56 and in accordance with 37 CFR §§ 1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 CFR § 1.56(b).

- ☒ In accordance with § 1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of

application, within three months of the date of entry into the national stage of the above identified application as set forth in § 1.491, before the mailing date of a first Office Action on the merits of the above-identified application, or before the mailing date of a first Office Action after the filing of request for continued examination under § 1.114, no additional fee is required.

☐ In accordance with § 1.97(c), this Information Disclosure Statement is being filed after the period set forth in § 1.97(b) above but before the mailing date of either a Final Action under § 1.116 or a Notice of Allowance under § 1.311, or before an action that otherwise closes prosecution in the application, therefore:

☐ Certification in Accordance with § 1.97(e) is attached; or

☐ The fee of \$180.00 as set forth in § 1.17(p) is attached.

☐ In accordance with § 1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311 but before, or simultaneously with, the payment of the Issue Fee, therefore included are: Certification in Accordance with § 1.97(e); and the submission fee of \$180.00 as set forth in § 1.17(p).

☒ Copies of reference numbers **1 – 29 and 32-33** listed on the attached Form PTO-1449 are enclosed herewith.

☒ Copies of reference numbers **30 - 31** on the attached Form PTO 1449 are not required to be submitted pursuant to 37 CFR § 1.98(a)(2)(i).

☐ Copies of references - are not being submitted because they were previously cited by or submitted to the U.S. Patent and Trademark Office in patent application number , filed for

**DOCKET NO.: CELL-0290/PA513-USW01**  
**PATENT**

- 3 -

which a claim for priority under 35 U.S.C. § 120 has been made in the  
instant application.

- ☐ The relevance of those listed references which are not in the English language is as follows:


There are no listed references which are not in the English language.

Please charge any deficiency or credit any overpayment to Deposit Account No. 23-3050. This form is submitted in duplicate.

Date: September 16, 2005

Jane E. Inglese  
Jane E. Inglese  
Registration No. 48,444

WOODCOCK WASHBURN LLP  
One Liberty Place - 46th Floor  
Philadelphia, PA 19103  
Telephone: (215) 568-3100  
Facsimile: (215) 568-3439

<b>Form PTO-1449 Modified</b>  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office		Docket No. CELL-0290/ PA513-USw01	Application No. 10/524,199
		Applicant Daniel Christopher Brookings, et al.	
		Filing Date July 28, 2005	Group Not Yet Assigned
		Confirmation No. 9911	
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
/N.C./	1	Adams, J.L., et al., "p38 MAP kinase: molecular target for the inhibition of pro-inflammatory cytokines," <i>Progress in Medicinal Chem., Elsevier Science</i> , King, F.D., et al. (Eds.), <b>2001</b> , 38, 1-60	
	2	Adhikari, R., et al., "An adventitious synthesis of 2,2'-dipyrryl disulfides," <i>Aust. J. Chem.</i> , <b>1999</b> , 52, 63-67	
	3	Allen, M., et al., "Deficiency of the stress kinase p38 $\alpha$ results in embryonic lethality: characterization of the kinase dependence of stress responses of enzyme-deficient embryonic stem cells," <i>J. Exp. Med.</i> , <b>2000</b> , 191, 859-869	
	4	Badger, A.M., et al., "Pharmacological profile of SB 203580, a selective inhibitor of cytokine suppressive binding protein/p38 kinase, in animal models of arthritis, bone resorption, endotoxin shock and immune function," <i>J. Pharmacol. Exp. Ther.</i> , <b>1996</b> , 279, 1453-1461	
	5	Chan, D.T., et al., "New N- and O-arylations with phenylboronic acids and cupric acetate," <i>Tetrahedron Lett.</i> , <b>1998</b> , 39, 2933-2936	
	6	Cohen, P., "The search for physiological substrates of MAP and SAP kinases in mammalian cells," <i>Trends Cell Biol.</i> , <b>1997</b> , 7, 353-361	
	7	Dinarello, C.A., et al., "An update on human interleukin-1: from molecular biology to clinical relevance," <i>J. Clinical Immunology</i> , <b>1985</b> , 5, 287-297	
	8	Doza, Y.N., et al., "Activation of the MAP kinase homologue RK requires the phosphorylation of Thr-180 and Tyr-182 and both residues are phosphorylated in chemically stressed KB cells," <i>FEBS Letts.</i> , <b>1995</b> , 364, 223-228	
	9	Enslen, H., et al., "Selective activation of p38 mitogen-activated protein (MAP) kinase isoforms by the MAP kinase kinases MKK3 and MKK6," <i>J. Biol. Chem.</i> , <b>1998</b> , 273, 1741-1748	
	10	Griswold, D.E., et al., "Pharmacology of cytokine suppressive anti-inflammatory drug binding protein (CSBP), a novel stress-induced kinase," <i>Pharmacol. Comm.</i> , <b>1996</b> , 7, 323-329	
/N.C./			
<b>EXAMINER</b>		/Nizal Chandrakumar/	<b>DATE CONSIDERED</b> 07/11/2008

<b>Form PTO-1449 Modified</b>  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office		Docket No. CELL-0290/ PA513-USw01	Application No. 10/524,199
		Applicant Daniel Christopher Brookings, et al.	
		Filing Date July 28, 2005	Group Not Yet Assigned
		Confirmation No. 9911	
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
/N.C./	11	Hale, K.K., et al., "Differential expression and activation of 938 mitogen-activated protein kinase $\alpha$ , $\beta$ , $\gamma$ , and $\delta$ in inflammatory cell lineages," <i>J. Immun.</i> , <b>1999</b> , 162, 4246-4252	
	12	Hartwig, J.F., et al., "Transition metal catalyzed synthesis of arylamines and aryl ethers from aryl halides and triflates: scope and mechanism," <i>Angew. Chem. In. Ed. Engl.</i> , <b>1998</b> , 37, 2046-2067	
	13	Hunter, T., et al. (Eds), "Protein kinase classification," <i>Methods in Enzymology</i> , Academic Press, San Diego, <b>1991</b> , Vol. 200, 3-39	
	14	Jiang, Y., et al., "Characterization of the structure and function of a new mitogen-activated protein kinase (p38 $\beta$ )," <i>J. of Biological Chem.</i> , <b>1996</b> , 271(30), 17920-17926	
	15	Konno, K., et al., "Improved procedures for preparation of 2-pyridones and 2-hydroxymethylpyridines from pyridine N-oxides," <i>Heterocycles</i> , <b>1986</b> , 24(8), 2169-2172	
	16	Kotlyarov, A., et al., "MAPKAP kinase 2 is essential for LPS induced TNF- $\alpha$ biosynthesis," <i>Nature Cell Biol.</i> , <b>1999</b> , 1, 94-97	
	17	Lam, P.Y.S., et al., "Copper-catalyzed general C-N and C-O bond cross-coupling with arylboronic acid," <i>Tetrahedron Lett.</i> , <b>2001</b> , 3415-3418	
	18	Lee, J.C., et al., "Bicyclic imidazoles as a novel class of cytokine biosynthesis inhibitors," <i>Annals N.Y. Acad. Sci.</i> , <b>1993</b> , 696, 149-170	
	19	Lee, J.C., et al., "Inhibition of monocyte IL-1 production by the anti-inflammatory compound, SKandP 86002," <i>Int. J. Immunopharm.</i> , <b>1988</b> , 10(7), 835-843	
/N.C./	20	Lee, J.C., et al., "A protein kinase involved in the regulation of inflammatory cytokine biosynthesis," <i>Nature, London</i> , <b>1994</b> , 372, 739-746	
EXAMINER		/Nizal Chandrakumar/	DATE CONSIDERED 07/11/2008

<b>Form PTO-1449 Modified</b>  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office		Docket No. CELL-0290/ PA513-USw01		Application No. 10/524,199	
		Applicant Daniel Christopher Brookings, et al.			
		Filing Date July 28, 2005		Group Not Yet Assigned	
		Confirmation No. 9911			
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>					
/N.C./	21	Luker, T.J., et al., "Palladium catalysed amination of electron deficient halothiophenes," <i>Tetrah. Letts.</i> , <b>2000</b> , <i>41</i> , 7731-7735			
	22	McDonnell, P.C., et al., "Localization of the human stress responsive MAP kinase-like CSAIDs binding protein gene to chromosome 6p21.3/21.2," <i>Genomics</i> , <b>1995</b> , <i>29</i> , 301-302			
	23	Subauste, M.C., et al., "Infection of a human respiratory epithelial cell line with rhinovirus," <i>J. Clin. Invest.</i> , <b>1995</b> , <i>96</i> , 549-557			
	24	Sont, J.K., et al., "Fully automated assessment of inflammatory cell counts and cytokine expression in bronchial tissue," <i>Am. J. Respir. Crit. Care Med.</i> , <b>2003</b> , <i>167</i> , 1496-1503			
	25	Takekawa, M., et al., "A family of stress-inducible GADD45-like proteins mediated activation of the stress-responsive MTK1/MEKK4 MAPKKK," <i>Cell</i> , <b>1998</b> , <i>95</i> , 521-530			
	26	Teran, L.M., et al., "Role of nasal interleukin-8 in neutrophil recruitment and activation in children with virus-induced asthma," <i>Am. J. Respir. Crit. Care Med.</i> , <b>1997</b> , <i>155</i> , 1362-1366			
	27	Turner, R.B., et al., "Association between interleukin-8 concentration in nasal secretions and severity of symptoms of experimental rhinovirus colds," <i>Clin. Infect. Dis.</i> , <b>1997</b> , <i>26</i> , 840-846			
	28	Wolfe, J.P., et al., "Scope and limitations of the Pd/BINAP-catalyzed amination of aryl bromides," <i>J. Org. Chem.</i> , <b>2000</b> , <i>65</i> , 1144-1157			
↓ /N.C./	29	Zhu, Z., et al., "Rhinovirus stimulation of interleukin-6 in vivo and in vitro," <i>J. Clin. Invest.</i> , <b>1996</b> , <i>97</i> (2), 421-430			
<b>EXAMINER</b>		/Nizal Chandrakumar/		<b>DATE CONSIDERED</b>	
				07/11/2008	

**Form PTO-1449 Modified**

List of Patent and Publications  
Cited by Applicant  
(Use several sheets if necessary)

U.S. Department of Commerce  
Patent and Trademark Office

Docket No.  
CELL-0290/  
PA513-USw01

Application No.  
10/524,199

Applicant  
Daniel Christopher Brookings, et al.

Filing Date  
July 28, 2005

Group  
Not Yet Assigned

Confirmation No.  
9911

**U. S. PATENT DOCUMENTS**

Examiner Initial		Document No.	Date	Name	Class	Subclass
/N.C./	30	3,935,222	01/27/76	Hoehn	260	295.5B
/N.C./	31	6,169,092 B1	01/02/01	Bräunlich, et al.	514	258

**FOREIGN PATENT DOCUMENTS**

Examiner Initial		Document No.	Date	Country	Translation	
					YES	NO
/N.C./	32	WO 99/64400 A1	12/16/99	PCT		
/N.C./	33	WO 03/033502 A1	04/24/03	PCT		

/Nizal Chandrakumar/

**EXAMINER**

**DATE CONSIDERED**

07/11/2008